EARNED VALUE MANAGEMENT SYSTEM (EVMS)

User's Pocket Guide

April 2005
Business Integration & Planning Group
Westinghouse Savannah River Company

Rev 0

HOW TO USE THIS GUIDE

The Westinghouse Savannah River Company Earned Value Management System (WSRC EVMS) complies with the criteria for project cost and schedule control as required by DOE M 413.3-1 and the ANSI EIA-748-A-1998 industry standard for earned value management. The WSRC EVMS applies to:

- Capital Line Items, Environmental Restoration and D&D projects greater than $20M.
- All efforts that satisfy the definition of a Project per DOE Order 413.3 and have a TPC of $20M or greater.

The EVMS User's Pocket Guide is a supplemental guide for control of projects in accordance with the WSRC EVMS System Description maintained by the Business Integration and Planning Group. The WSRC EVMS complies with the Site's EVMS Policy Statement and the SRS Project Management Control System in the WSRC Manual 6B, Program Management.

The WSRC EVMS provides for effective planning and control and is fully dedicated to the integration of cost, schedule and scope information through supporting SRS policies, procedures, work flow, forms, reports, and computer systems.

The user bears the responsibility to refer to the WSRC EVMS System Description and applicable policies, manuals, procedures and guides for specific detailed guidance.

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EVMS Web: DCOP Link from SHRINE homepage

What is the WSRC EVMS?

The WSRC EVMS is an integrated scope, schedule, and cost control system comprising policies, procedures, desktop instructions, workflow processes, reports, and data management systems that provide for effective planning and control of the project. This system is the primary cost and schedule management tool used to meet both external and internal project management objectives. It also meets the internal needs of the Project Management Team for performance monitoring and management of the work.

ANSI EIA-748-A-1998 identifies 32 EVMS criteria within 5 functional groups. The WSRC EVMS System Description addresses the criteria and functional areas in detail. This pocket guide includes the 5 functional areas as well as other pertinent EVMS information.

The 5 functional groups include:

1. **Organization**
2. **Planning, Scheduling, Budgeting**
3. **Accounting Considerations**
4. **Analysis and Management Reports**
5. **Revisions and Data Maintenance**

WSRC Earned Value Management Policy

The WSRC EVMS Policy Statement outlines an integrated management control system with principles and policies that require projects do the following:

- Plan all project scope through completion.
- Breakdown the project scope into manageable pieces that can be assigned to a responsible person or organization for control of scope, schedule and cost objectives.
- Integrate project scope, schedule, and cost objectives into a baseline plan against which accomplishments may be measured.
- Collect and record actual costs in the same manner as planned, and compare those costs to the performance baseline in the same manner as planned.
- Objectively measure project performance.
- Analyze significant variances and implement management actions to mitigate risks and manage cost and schedule performance.
- Incorporate authorized changes to the baseline in a controlled and timely manner.

Summarizing Earned Value Management

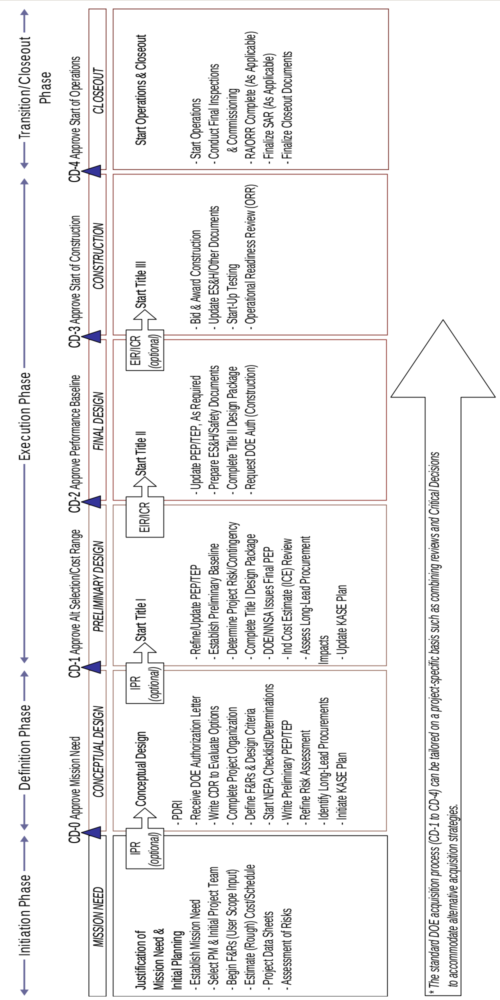
- Earned Value Management integrates cost, schedule, and technical (scope)
- Performance is measured based on the physical work accomplished
- Earned Value is expressed in terms of the budget assigned to that scope of work

Integration of DOE Order 413.3 to the WSRC EVMS Process

Implementation of the WRSC EVMS process begins early, with the approval of the project Mission Need. While WSRC applies EVMS techniques during all phases of project work, DOE Order 413.3 requires the formal EVMS process to begin after approval of CD-2, Approve Performance Baseline (CD-2/3 for Environmental Restoration Projects). At this time, a Performance Measurement Baseline (PMB) is established, and formal (required) EVMS reporting begins. The formal EVMS processes in place include the following:

- Work Breakdown Structure (WBS)
- Organizational Breakdown Structure (OBS) & Responsibility Assignment Matrix (RAM)
- Full financial reporting requirements
- Fully Integrated Resource Loaded Schedule
- Performance Measurement Baseline (PMB)
- Assignment of Control Account Managers (CAM) to Control Accounts (CA)
- Implementation of EVMS for Control Accounts within the WBS elements
- Rolling Wave concept for baseline planning
- Full implementation of EVMS performance metrics
- Accessibility of EVMS data throughout the project structure
- Formal Baseline Change Control procedures

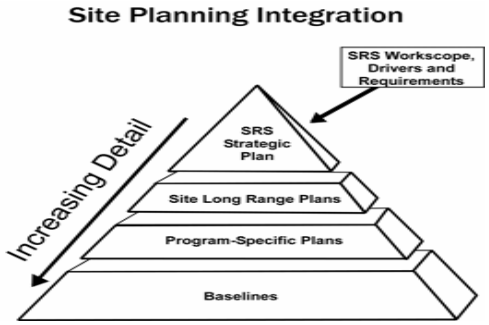
Integration of DOE Order 413.3 to the WSRC EVMS Process



ANSI / EIA 748-A EVMS Guidelines Phased to Typical SRS EVMS Process

SRS Project Planning and Authorization

The SRS planning and authorization of scope is a systematic process that includes the development, approval, revision, and integration of the SRS plans with budget formulation, budget execution, and program evaluation. The process includes customer input and stakeholder involvement.



The comprehensive planning process addresses short-, medium-, and long-range planning for applicable facilities and infrastructures within the SRS boundaries. The planning process addresses setting the planning boundaries, program and mission plans, and, life-cycle plans written for various DOE programs. These describe, in detail, plans for the various missions and programs at SRS, including proposed and planned Line Items and capital projects necessary to accomplish the missions for the DOE programs.

The WSRC contract with DOE is the controlling document for all WSRC activities and defines WSRC scope, as well as the WSRC planning/authorization limits, in the Performance Evaluation and Measurement Plan (PEMP).

Organization

Early establishment of the project organizational structure provides a cohesive and manageable structure for project development, execution and control. The organization of the project continues to be assessed and refined throughout the project life-cycle. The major components of the project organization include:

Work Breakdown Structure (WBS): The WBS is a hierarchical structure defining all authorized contract work at an appropriate level needed for management insight and control. The WBS is a project oriented integrating tool used as the common project reference point for planning, budgeting, estimating, work authorization, cost accumulation, and performance reporting. Project resources are linked and traceable to the scope and the responsible organizations both vertically and horizontally throughout the entire WBS structure.

WBS Dictionary: The WBS Dictionary is a narrative summary description of each WBS element. The WBS Dictionary shall include a complete definition of the entire work scope of the project. Additional information and attributes may be documented in a WBS Definition Worksheet as necessary. Approved changes to the project scope that affect the WBS Dictionary summary narratives and associated documents will be incorporated in a timely manner.

Organizational Breakdown Structure (OBS): The OBS identifies the organization, by functional discipline, assigned responsibility for the performance of the project scope. The OBS applies across all the partner companies and provides for the assignment of responsibility for elements of the WBS.

Organization

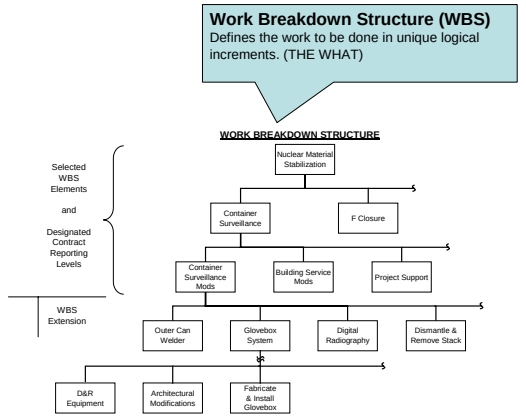
Responsibility Assignment Matrix (RAM): The RAM is the intersection of the WBS and the OBS and defines lines of responsibility and accountability for ensuring that the scope associated with the Control Account is accomplished. The RAM defines the resources allocated to the work task and maps the effort to the responsible organization. The RAM

- Identifies the WBS level where Control Accounts are established.
- Identifies, from a single organizational element, the Control Account Manager (CAM).
- Identifies major subcontracts.

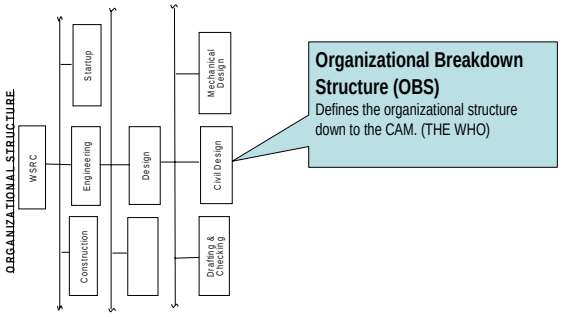
Control Account Plan (CAP): Assigning elements of the WBS to the manager responsible for its execution results in a single control point called a Control Account. The person assigned responsibility for a Control Account is called a Control Account Manager (CAM). The CAM is responsible for the scope, cost, and schedule progress in each assigned Control Account. These responsibilities include the planning and control of each Control Account and the identification, analysis, and reporting of significant variances.

The CAM, with assistance from Project Controls, is responsible for developing the Control Account Plan (CAP). The CAP documents the scope, cost, and schedule baselines and identifies any further subdivision of the Control Accounts into Work Packages or Planning Packages. The CAP will identify the specific scope, budget, schedule, and earned value technique(s) to be utilized in measuring the performance of each Work Package.

Organization

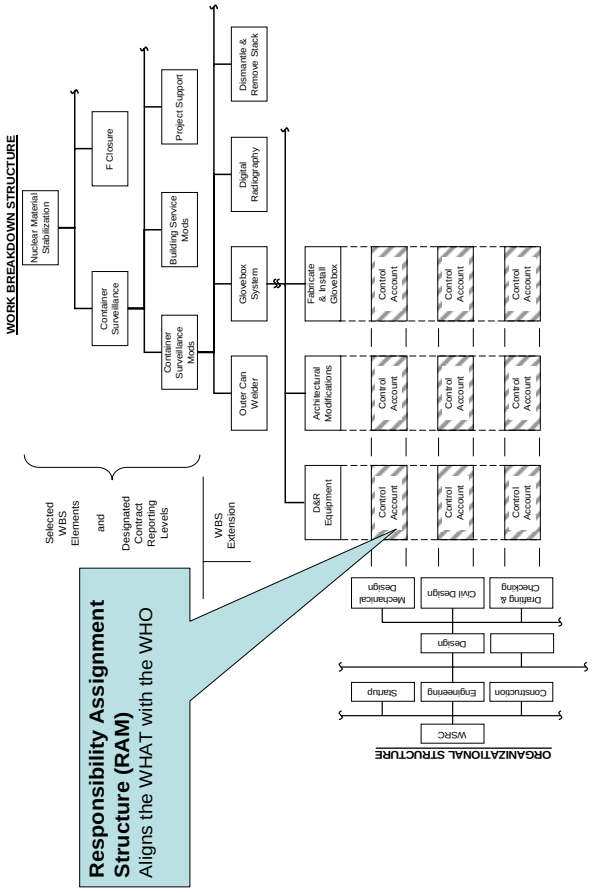


Work Breakdown Structure (WBS) Example



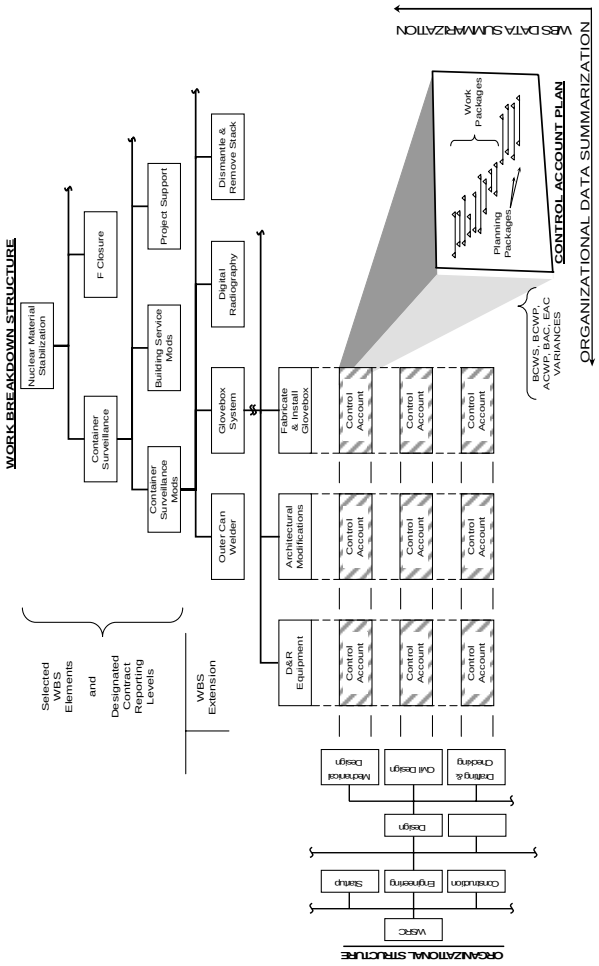
Organizational Breakdown Structure (OBS) Example

Organization



Responsibility Assignment Matrix (RAM) and Control Accounts

Organization



Management and Control Points

Planning, Scheduling & Budgeting

The integrated project baselines provide the basis for control and measurement of progress and performance throughout the project life. The baselines evolve throughout the project life-cycle from the initial definition of the scope, milestones, and schedule, development of cost estimates, budgeting, work authorization, and cost accumulation processes. Baseline components include:

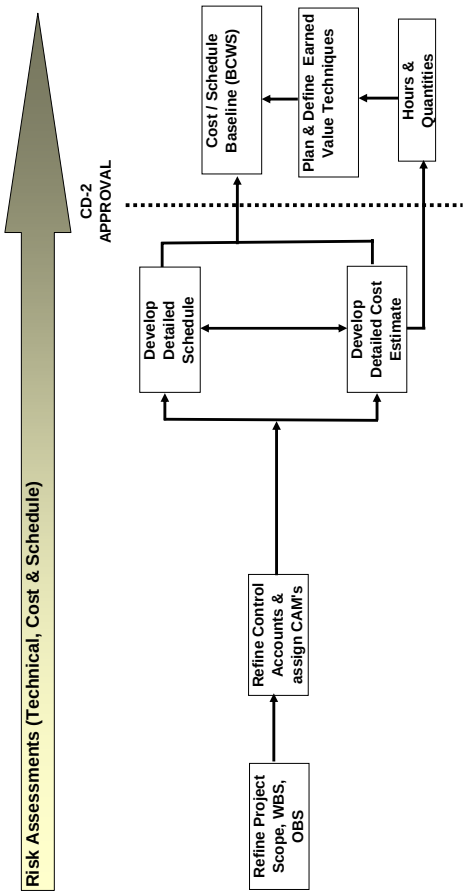
Scope (Technical) Baseline: Project technical goals and characteristics describes the product that meets the Project Sponsor's requirements and ensures operability and maintainability of the final product.

Cost Baseline: The estimated cost of executing the project in accordance with the scope and schedule baselines. Cost baselines are established at the Total Project Cost (TPC) level, which includes both DOE and Contractor Contingency. The Performance Measurement Baseline (PMB), which excludes contingencies, is the cost baseline, or Budgeted Cost of Work Scheduled (BCWS), for measuring EVM progress and performance.

Schedule Baseline: Established durations, sequences, and interdependencies of project activities for accomplishing the project milestones. This includes directed project milestones, high level milestone baseline and the supporting internal milestones and detailed schedule.

Baselines are established, monitored, and controlled through all phases of the project. The Project Budget Base is established during WSRC/DOE negotiations and includes the PMB and Contractor Contingency. The following figure depicts the steps for planning and establishing the PMB.

Planning, Scheduling & Budgeting



Establishing the Performance Measurement Baseline (PMB)

Planning, Scheduling & Budgeting

Performance Measurement/Earned Value: Earned Value comparisons are used to evaluate performance for all activities. The 3 key components for EVMS metrics (BCWS, BCWP, ACWP) are always expressed in dollars.

- Schedule Variance (SV) = BCWP - BCWS
- Cost Variance (CV) = BCWP – ACWP

Earned Value Determination: The 3 basic methods for determining performance measurement include:

- **Discrete Effort –** Discrete tasks are those tasks which are quantifiable to individual work products or predetermined tangible measurement. Techniques utilized for Discrete efforts are:
  - **Fixed Formula –** 0/100, 50/50, 25/75 etc.
  - **Units Complete –** physical quantity count
  - **Milestone –** predetermined percent complete based on internal milestones within the Work Package
  - **Percent Complete –** predefined earning methodology based on detailed steps or hours necessary to complete the task.
- **Apportioned Effort –** This method involves the EV for a Work Package being based upon a defined relationship with a related discrete Work Package(s) from which progress is measured objectively. For example, Non-Manual Construction Support could be evaluated at 90% of the composite percent complete of all direct construction Work Packages. The final 10% would be earned when the paperwork closeout at the end of the project is complete (which is generally after the craft is gone).

- **Level of Effort (LOE) –** This method is used for efforts of a general or supportive nature, which does not produce a definite end product. A LOE Work Package uses only one EV technique – the BCWP equals the BCWS in each reporting period. LOE tasks are measured through the passage of time rather than through application of a discrete EV technique. Project Management and Project Controls are examples of two Control Accounts that could use the LOE method. LOE accounts are to be kept to a minimum.

Material or subcontract items must utilize an effective performance measurement that allows for earned value to be claimed in the same accounting period as actual costs. In general, material will be earned in the following manner:

- **Engineered Equipment –** Engineered materials are budgeted and costed for performance measurement reporting purposes when the material is received and accepted, or is based on a verifiable progress payment schedule.
- **Field or Bulk Materials –** Field materials are budgeted and costed for performance measurement reporting purposes when the material is withdrawn from stores.
- **Subcontracts –** The request for proposal shall include any subcontractor requirements for supporting the WSRC EVMS. The Project Manager balances this request by assessing the subcontract risk and management visibility requirements versus the subcontractor cost to generate the EVMS reporting.

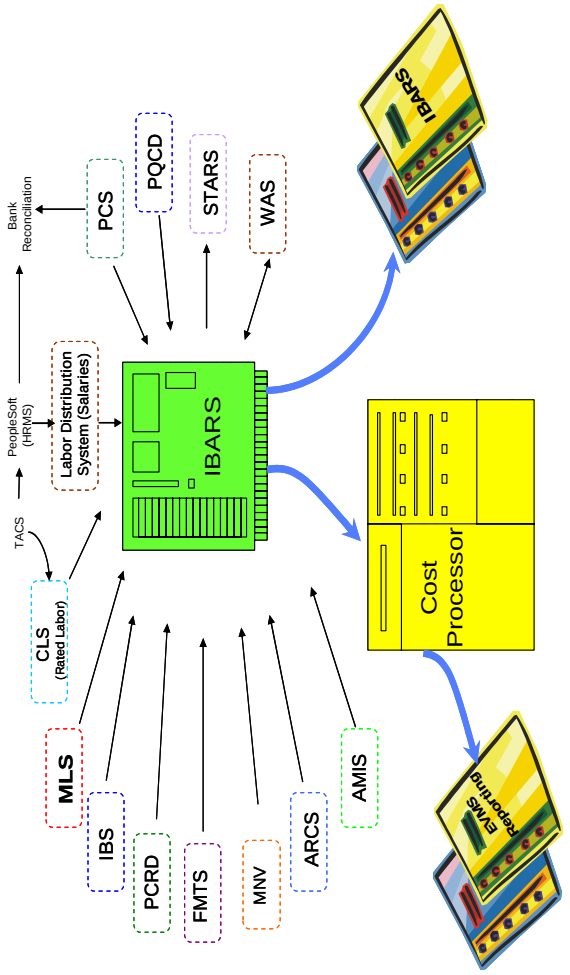
ACCOUNTING CONSIDERATIONS

The WSRC commitment to financial stewardship and its accounting system is based on accepted accounting principles and cost accounting standards which comply with Department of Energy regulations and requirements, including the ANSI/EIA-748-A-1998 guidelines. WSRC complies with the Cost Accounting Standards (CAS) in its accounting and charging practices. A CAS disclosure statement is developed and submitted to DOE annually. The disclosure statement provides a general description of WSRC's accounting practices, including the criteria for classifying direct and indirect costs and the basis for allocating indirect costs.

The Integrated Budget, Accounting and Reporting System (IBARS) is the official financial system at WSRC and is supported by numerous financial systems to ensure accounting data integrity. The IBARS accounting system collects, identifies, and records Actual Costs of Work Performed (ACWP) for both direct and indirect work, in a manner consistent with the way the scope is planned in the project cost processor.

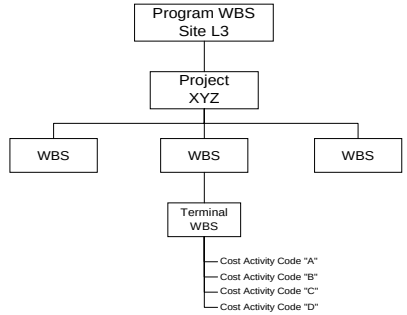
Retroactive changes of accounting records are not allowed. Prior period adjustments and corrections for mischarges, rate adjustments, and accounting errors are made to the current accounting month only prior to the month-end closeout. Accounting adjustments and cost transfers from one charge code to another are proposed by the project team and processed by Chief Financial Officer (CFO) Accounting only in accordance with formal procedures.

ACCOUNTING CONSIDERATIONS



ACCOUNTING CONSIDERATIONS

Cost Collection: WSRC costs are collected against final cost objectives within a WBS project structure. All costs are collected at the terminal WBS level through the use of unique cost activity codes.



Financial Cost Collection Hierarchy

Direct Costs: Direct costs are specifically identifiable with or attributable to a project. This includes costs identifiable with its assigned activity code within a terminal WBS and includes labor, material, subcontracts, or any other directly associated costs.

Indirect Costs: Indirect costs are those costs that cannot be identified specifically with a final cost objective and are accumulated in indirect costs pools. Indirect costs are distributed to the projects through an allocation process by applying recovery rates based on a proportionate allocation base.

Direct Materials: Direct materials are those materials that can be specifically and consistently identified to a final cost objective, whether they are procured directly from an outside vendor or withdrawn from a material center inventory.

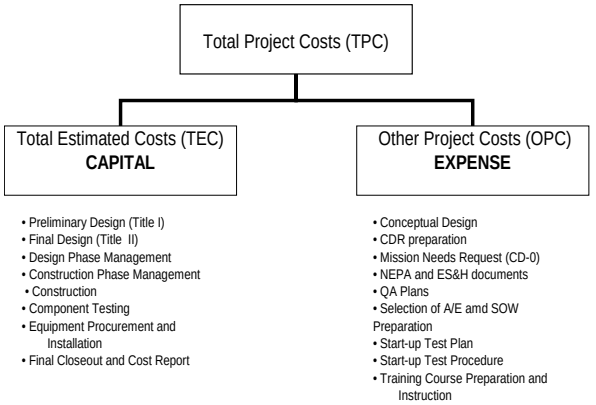
ACCOUNTING CONSIDERATIONS

Indirect Materials: Materials that cannot be directly associated with a final cost objective are considered indirect and are charged at actual cost to the organization utilizing the resources. These indirect materials are charged to a final cost objective as overhead costs through indirect rates applied to direct labor dollars in CLS.

Capital Project Cost Classification and Funding: In accordance with DOE requirements, all capital project costs must be segregated into two categories – Capital or Expense. Determination of the category depends on the appropriate project management classification of the work as either Total Estimated Cost (TEC), Other Project Cost (OPC) or Normal Operating Expense (Opex).

AT SRS, the typical breakdown is as follows:

TPC = TEC + OPC



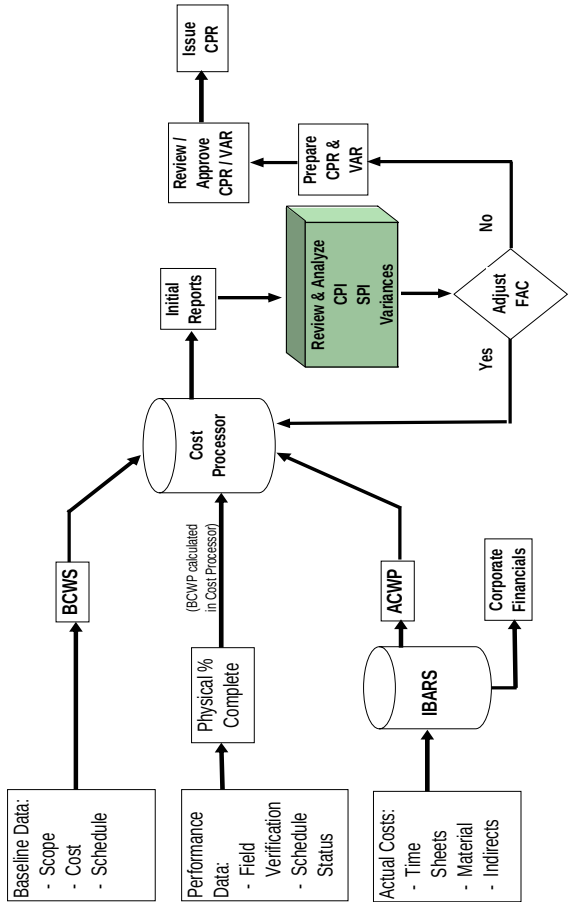
Analysis and Management Reports

The monthly management reporting cycle identifies project performance based on EVMS metrics and variance analyses. Once performance measurement is completed and submitted, the EVMS metrics are updated, proving management the ability to:

- Measure actual progress, costs incurred, and their comparison to baseline plans.
- Identify and analyze significant variances between planned and actual performance for initiation of corrective action.
- Structure and summarize the status, progress, and analytical data to report to all levels of management.
- Assemble and present the information in formal, contractually required reports.

Variance Analysis & Reporting: Effective analysis of deviations from the plan for both schedule and cost provides management the ability to rapidly and effectively implement corrective actions. The Cost Performance Reports (CPR) issued monthly from the cost processor data provide the CAM(s) the metrics to:

- Assess actual progress, costs incurred, and their comparison to baseline plans.
- Identify and analyze significant variances between planned and actual performance for initiation of corrective action.
- Structure and summarize the status, progress, and analytical data to report to all levels of management.
- Assemble and present the information in formal, contractually required reports for submittal to DOE.



Variance Analysis Reporting and Cost Performance Report Production Process Flow

Analysis and Management Reports

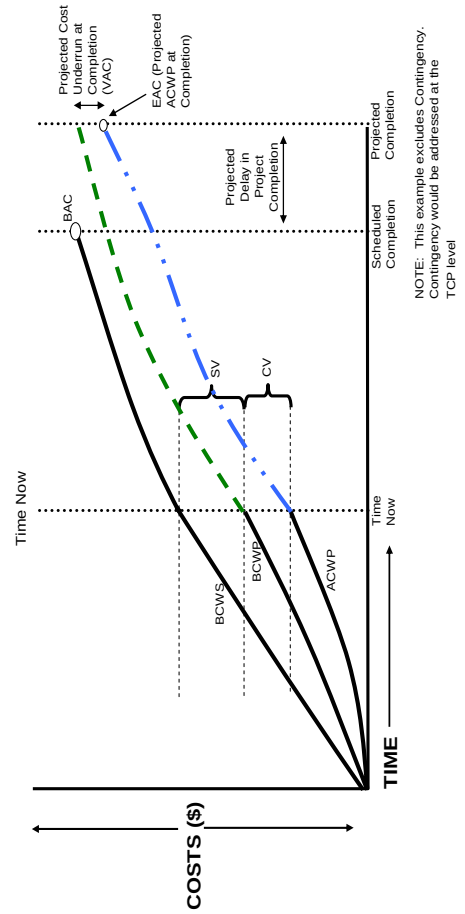
CAMs, with the support of Project Controls, are required to review, analyze, and report on all Control Accounts with variances exceeding thresholds for current month, cumulative, or at completion. Variance analysis provides the means for the CAM to communicate scope, cost, schedule, and EAC divergences from the PMB. The formulas for determining variances are as follows:

ACRONYMS

ACWP	Actual Cost of Work Performed
BCWP	Budgeted Cost of Work Performed
BCWS	Budgeted Cost of Work Scheduled
BAC	Budget-At-Completion
CPI	Cost Performance Index
CV	Cost Variance
EAC	Estimate-At-Completion
ETC	Estimate-To-Complete
SPI	Schedule Performance Index
SV	Schedule Variance
VAC	Variance At Completion

PERFORMANCE FORMULAS

SV =	BCWP - BCWS
CV =	BCWP - ACWP
SPI =	BCWP / BCWS
CPI =	BCWP / ACWP
VAC =	BAC - EAC



Control Account
EVMS Metrics Example

Analysis and Management Reports

Estimate At Completion (EAC): The EAC is a forecast for completing the total project considering both performance to-date and other factors that may affect future progress. An EAC is prepared to accurately reassess the total cost, schedule, and risk of the project. EACs consist of 2 major components:

- Actual Cost and progress to date (ACWP)
- Estimated cost of the remainder of work to complete the project (ETC)

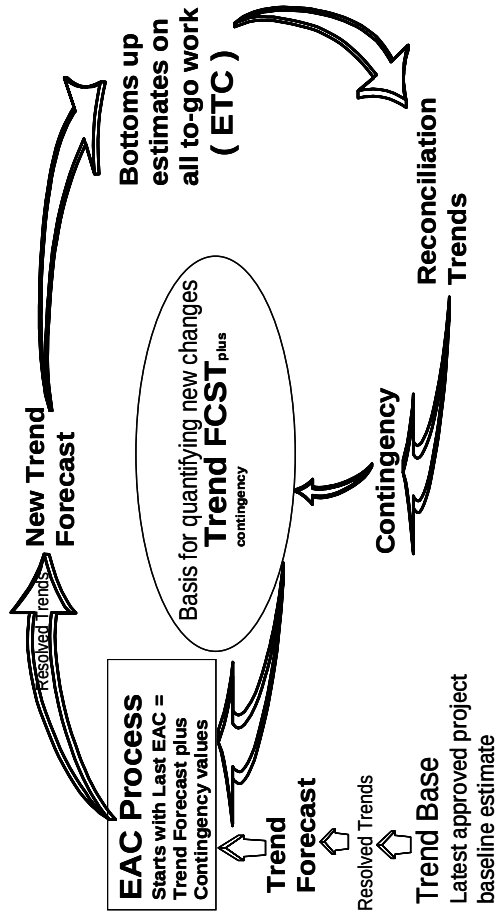
Mathematically, the EAC may be expressed as:

$$EAC = ACWP + ETC$$

A detailed estimate, schedule reassessment, risk analysis, and associated Contingencies are prepared for the remainder of work to-go on the project. This establishes the ETC value and, when combined with actual cost to date on the project, determines the EAC.

Forecast-At-Completion (FAC): The FAC is a summary level assessment prepared periodically to capture performance, issues, trends, and resource requirements identified since the last formal EAC. The FAC should consider the following:

- Actual Cost to date (ACWP)
- Summary evaluation of the remainder of the work to go on the project, which is the Forecast-to-Complete (FTC).



Trending and EAC Cycle

Revisions and Data Maintenance

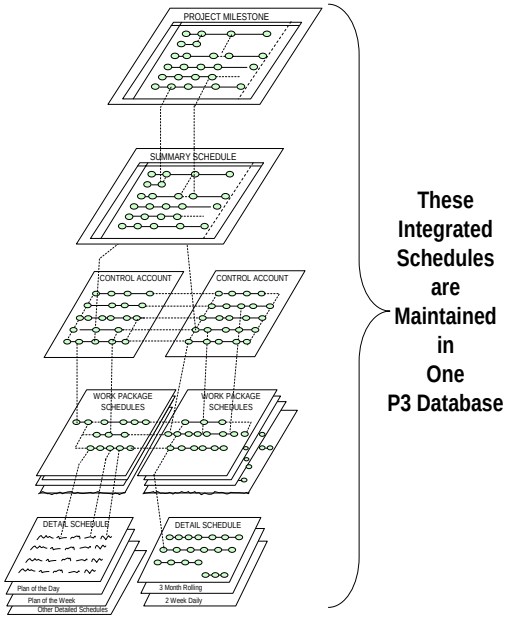
The integrity of the WSRC EVMS and the assessment of project performance are dependent on maintaining the validity of the PMB throughout the performance period. The WSRC EVMS includes procedures which ensure a timely, formal, and documented process that:

- Defines conditions under which baseline documents and Project Baselines may be changed in a controlled manner.
- Ensures that scope, schedule, and cost baselines are always processed together to facilitate accurate performance measurement.
- Identifies the controlling authority for Project changes, based on formal thresholds and limits of authority.
- Establishes a process for managing and documenting changes to project scope, cost, and schedule baseline documents and/or the PMB. The PMB will include only authorized scope for the project.
- Accommodates emergency changes.
- Controls retroactive changes.
- Maintains a record log of all Baseline Change Proposal (BCP) actions in process, approved or declined.
- Maintains a trend process that provides a systematic method for reporting and dispositioning identified potential scope, cost and/or schedule impacts to the project.

Refer to Manual 6B, Procedure 7.1 for current programmatic thresholds and to Manual E11 for project related changes.

SCHEDULING QUICK REFERENCE

Schedules are organized in a hierarchy that is logically tied within a Critical Path Method (CPM) network. The resource loaded schedules become the basis for scheduling work activities, time-phasing resources, monitoring and evaluating deviations, and exercising schedule control. Detailed schedules are monitored and updated first and are then summarized upward to high-level schedules. Project schedules are maintained in a database that allows summarization as well as vertical and horizontal integration.



SCHEDULING QUICK REFERENCE

Baseline Schedule - The version of the schedule that reflects all formally authorized scope and schedule changes.

Critical Activity - Activity on the critical path.

Critical Path - A logically related sequence of activities in a CPM schedule having the longest duration. The total float is zero. A delay in any activity will have a corresponding impact on the completion date of the project.

Current Schedule - The schedule reflects actual progress to date plus forecast progress from that date forward.

Duration - Time to complete an activity.

Early Dates - Indicate the earliest start and finish dates when an activity can be performed if all preceding activities have been completed.

Finish to Finish – FF - A relationship in which the Finish of a successor activity depends on the Finish of its predecessor activity.

Finish to Start – FS - A relationship in which the predecessor activity must Finish before its successor activity can Start.

Float or Total Float - The amount of time the start or finish of an activity can be delayed without affecting the Project Finish Date.

Free Float - The amount of time that the early start of an activity can be delayed without delaying the early start of a successor activity.

Lag - An offset or delay from an activity to its successor.

Late Dates - Late start and finish dates are the latest dates an activity can be performed without delaying a successor activity.

SCHEDULING QUICK REFERENCE

Milestone - An event in a CPM schedule representing objectives determined to be critical control points, selected by Management to monitor and control progress toward the accomplishment of approved scope of work. A Milestone has no duration.

Original Duration - The planned estimate of the number of work periods required to accomplish an activity.

Predecessor - An activity that must occur before another activity. A predecessor activity controls the early start or early finish date of its successor(s). An activity can have multiple predecessors, each with a different relationship.

Project Baseline Schedule - Established at 35% design complete.

Relationship (Logic) Type - The condition that controls how an activity is related to its predecessors or successor.

Remaining Duration - The number of work periods forecasted to complete the activity.

Schedule Contingency - Duration added to a schedule to allow for the probability of possible or unforeseen events.

Start to Finish – SF - A relationship in which the Start of the predecessor activity controls the Finish of a successor activity.

Start to Start – SS - A relationship in which the Start of the predecessor activity controls the Start of a successor activity.

Successor – An activity that occurs after another activity. An activity can have multiple successors, each with a different relationship.

Earned Value Terminology

Actual Cost of Work Performed (ACWP): The costs actually incurred and recorded for the work accomplished through the status date. ACWP consists of the costs for labor, material, and other direct resources.

Budget at Completion (BAC): Sum of the budgets for work to be accomplished.

$BAC_{(PMB)}$ does not include Contingency.
$BAC_{(TPC)}$ includes Contingency

Budgeted Cost of Work Performed (BCWP): The physical work performed to date expressed in terms of the budget assigned to that work. Also known as Earned Value.

Budgeted Cost of Work Scheduled (BCWS): The sum of the approved cost estimates for activities (or portions of activities scheduled to be performed during a given period (usually project to date). Also known as Planned or Budgeted Value.

Control Account (CA): Management control point at which actual costs are accumulated and performance determined.

Cost Performance Index (CPI): Indicates whether the cumulative actual costs during the assessed period are higher or lower than budgeted for the work completed.

CPI = BCWP/ACWP
CPI >1.0 indicates cost is less than budgeted
CPI <1.0 indicates cost is greater than budgeted

Cost Variance (CV): The difference between budgeted cost of work performed and actual cost of the work performed.

CV = BCWP – ACWP
Positive CV = “Cost Underrun”
Negative CV = “Cost Overrun”

Cost Variance % (CV)%: The percentage of cost variance from what has been earned to date.

CV% = (CV/BCWP) x 100

Estimate at Completion (EAC): An EAC includes the actual cost incurred to date plus a to go estimate for the remaining scope of work.

EAC = ACWP + ETC

Estimate To Complete (ETC): An estimated cost to complete the remaining work on the project .

Earned Value Terminology

Fiscal Year Forecast (FYF): Forecasted estimate of the cost of the work to be performed during the current fiscal year.

Forecast at Completion (FAC): Includes cumulative to date actual cost plus a projected forward plan through the project completion. Less rigorous that an EAC.

Funding: The incremental authorization by DOE for expenditures on programs/projects. Funding generally means the current fiscal year authorized funding amount plus the contractually agreed to GFSI amount for future fiscal years.

Performance Measurement Baseline (PMB): The time-phased budget plan that is used to measure performance.

PMB = $BAC_{(TPC)}$ – Contingencies

$BAC_{(PMB)}$ = PMB = BCWS

Schedule Performance Index (SPI): The ratio of work performed to work scheduled.

SPI = BCWP/BCWS

SPI >1.0 indicates the project has completed more work than planned. (Note: Work done out of sequence can lead a team to believe the project is ahead of schedule when it is not.)

SPI <1.0 indicates less work completed than planned.

Schedule Variance (SV): The difference between work performed and the work scheduled.

SV = BCWP – BCWS

Positive SV = more work has been accomplished than Scheduled

Negative SV = less work completed than planned

Schedule Variance % (SV)%: The percentage of schedule variance from what has been planned to date.

SV% = (SV/BCWS) x 100

To Complete Performance Index (TCPI): Calculates the efficiency required to achieve the EAC/LRE/BAC.

$$TCPI = \frac{Work\ Remaining)}{Money\ Required} = \frac{BAC - BCWP(cum)}{BAC - ACWP(cum)}$$

NOTE: May substitute EAC for BAC in denominator to determine efficiency needed to complete within the EAC.

Acronyms List

ACWP	Actual Costs of Work Performed
BAC	Budget At Completion
B&R	Budget and Report
BCP	Baseline Change Package
BCWP	Budgeted Cost of Work Performed
BDER	Business Decision Estimate Range
BCWS	Budgeted Cost of Work Scheduled
CA	Control Account
CAM	Control Account Manager
CAS	Cost Accounting Standards
CD	Critical Decision
CE	Capital Equipment
CFO	Chief Financial Officer
CLS	Consolidated Labor System
CO	Contracting Officer
CPB	Contract Performance Baseline
CPI	Cost Performance Index
CV	Cost Variance
D&D	Deactivation and Decommissioning
DOE	Department Of Energy
DOE-SR	Department of Energy – Savannah River
EAC	Estimate at Completion
ECN	Emergency Change Notice
EIR	External Independent Review
EM	Environmental Management
ESS	Essential Site Services
ETC	Estimate to Complete
EVMS	Earned Value Measurement System
FAC	Forecast-At-Completion
FIS	Functional Intermediate Schedule
FYF	Fiscal Year Forecast
FYTD	Fiscal Year to Date
G&A	General and Administrative
GFSI	Government Furnished Services and Items
GPP	General Plant Project
IBARS	Integrated Budget, Accounting & Reporting System
IBS	Integrated Budget System
IPABS	Integrated Planning, Accountability, and Budgeting System
IPS	Integrated Project Schedule

Acronyms List

LI	Line Item
LOE	Level Of Effort
MC	Management Challenge
MCS	Management Control System Description
NNSA	National Nuclear Security Administration
OBS	Organization Breakdown Structure
OPC	Other Project Costs
OPEX	Operating Expense
PAR	Provisional Authorization Request
PARS	Project Assessment and Reporting System
PBB	Project Budget Base
PBS	Project Baseline Summary
PEMP	Performance Evaluation Measurement Plan
PEP	Project Execution Plan
PMCS	Project Management Control System
PMB	Performance Measurement Baseline
PP	Planning Package
RAM	Responsibility Assignment Matrix
SOW	Statement of Work
SPI	Schedule Performance Index
SV	Schedule Variance
STARS	Standardized Tracking and Reporting System
SV	Schedule Variance
TCPI	To Complete Performance Index
TEC	Total Estimated Costs
TEP	Team Execution Plan
TPC	Total Project Cost
UB	Undistributed Budget
VAC	Variance-At-Completion
WAD	Work Authorization Document
WBS	Work Breakdown Structure
WP	Work Package
WA/EP	Work Authorization/Execution Plan
WAPB	Work Authorization Performance Baseline
WBS	Work Breakdown Structure
WSRC	Westinghouse Savannah River Company
YFP	Yearly Forecast Plan

EVMS Quick Reference

BCWS = Budgeted Cost of Work Scheduled
BCWP = Budgeted Cost of Work Performed
ACWP = Actual Cost of Work Performed

Cost Related Calculations:

Cost Variance:	$CV = BCWP - ACWP$
Cost Variance %:	$CV\% = \frac{CV}{BCWP} \times 100$
Cost Performance Index:	$CPI = \frac{BCWP}{ACWP}$

Schedule Related Calculations:

Schedule Variance:	$SV = BCWP - BCWS$
Schedule Variance %:	$SV\% = \frac{SV}{BCWS} \times 100$
Schedule Performance Index:	$SPI = \frac{BCWP}{BCWS}$

Other Calculations:

% Spent:	$\% \text{ Spent} = \frac{ACWP(cum)}{BAC} \times 100$ Note: May substitute EAC in the denominator to determine the % of EAC spent (total funds required).
% Complete:	$\% \text{ Complete} = \frac{BCWP(cum)}{PMB} \times 100$
To Complete Performance Index:	$TCPI = \frac{BAC - BCWP(cum)}{BAC - ACWP(cum)}$ NOTE: May substitute EAC for BAC in denominator to determine efficiency needed to complete within the EAC.

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